



## Electrostatics Society of America

Newsletter 165 - June/July 2003

### President's Message - June/July 2003

It's with great pleasure that I look forward to welcoming ESA and IEEE members at the upcoming June 2003 Conference. This historical meeting – the first ever joint conference between the ESA and the Electrostatic Processes Group of the IEEE Industry Applications Society – is being held as a grand experiment. Each group brings to this joint meeting its own strengths and advantages. The IAS-EPC brings the organizational stature of the IEEE and its Transactions publication plus a worldwide membership in electrostatics that intersects that of the ESA by only about 30%. The ESA brings a tradition of interspersing less formal talks, demonstrations, and discussions that span a broad spectrum of non-traditional electrostatics with traditional, formal papers. The organizers on both sides are excited about this meeting and have cooperated with each other in every way. The number of papers submitted – now over 100 -- has exceeded all expectations. Both groups feel it important to keep a 3-day format for the conference, so as to make it financially feasible for self-funded attendees and logistically feasible for industrial attendees for whom travel time is at a premium. All papers presented in oral and poster formats will be eligible for consideration by either the IEEE Transactions on Industry Applications or the Journal of Electrostatics.

Important: Please note that each day of the conference – including Friday -- will be a *full conference day* with papers scheduled until 5:00 on Friday. This one change over our usual Friday-noon closing was made so as to accommodate as many papers as possible. In the past, we've resorted to full Fridays and even Saturday morning sessions when the paper count has been large, so this change is not as radical as it may seem. The decision to stick to the 3-day format also has required that some papers be presented in poster format so that we can keep the oral presentation times to 20 minutes (This time is already too short!) The IEEE-IAS EPC group, as well as numerous other professional societies, use this format with great success. For those who may be unfamiliar with poster format, let me describe it briefly. One may think of the poster session as an opportunity to deliver multiple oral papers simultaneously. Papers chosen for poster presentation carry the same weight and recognition as oral posters and are similarly considered for future publication in IEEE Transactions or the Journal. Prior to poster session, authors will have prepared a set of posters describing their work; these will be mounted on stand-up easels, one panel per author. During the session, the entire conference body will congregate in a large hall and pass from poster to poster. Each poster station will be staffed by one of its authors who will receive visitors in small groups, offering a short presentation to each and fielding any questions that arise. Visitors can spend as much time as desired at any given poster station. We have allowed ample time (approximately 2 hours per session) so that each poster will be given the time it deserves for full dissemination of research results. Poster format is a new venture for the ESA, hence we'll consider it an experiment in how to deal with large numbers of quality papers that are submitted to popular and attractive conferences.

Let me list some of the other highlights that await attendees to the conference:

- Plenary lectures by guest speakers highlighting new directions in electrostatics.
- An industrial forum attended by companies working in electrostatics-related fields.
- Conference Proceedings edited and produced by Laplacian Press as it has been in the past.
- A banquet presentation by none other than our own, ever-popular Dr. Glenn Schmieg.
- Separate annual business meetings have been scheduled for the ESA and IEEE-IAS/EPC so that members who hold joint membership can attend both meetings.
- Shuttle bus service between the Peabody Hotel and the University conference site each day.
- The usual informal spouses/family “committee” will convene to plan sightseeing trips during conference days.
- Opportunities for visits to nearby Hot Springs on the Saturday following the conference.

I'd like to take this opportunity to thank those who have made this conference possible. Prof. Toshiaki Yamamoto, Chair of the EPC and IEEE Technical Conference Chair, has done a great deal of work in soliciting and organizing a diverse and comprehensive set of technical papers. It's been a pleasure to co-chair with him, and I hope that the ESA-EPC relationship that we've established will continue to the future. Prof. Malay Mazumder of UALR has done a *fabulous* job of organizing the conference venue, including hotel accommodations, transportation, and all conference facilities. He is also responsible for initiating the plenary guest lectures and arranging for their sponsorship. I'd like also to thank the ESA Executive Council and the IEEE-IAS EPC board members for their extensive input and advice surrounding this ambitious endeavor. Finally, I'd like to ask you all to join me in thanking Joe and Barbara Crowley of Electrostatic Applications/Laplacian Press who work tirelessly behind the scenes each year to produce our Conference Proceedings. The large amount of work involved in this task is perhaps the most understated element of the conference, but one on which we have steadfastly relied for nearly a decade. Many thanks to all.

### **Has it Really Been Four Years?**

On another subject, I note that this message will be my last as your ESA President. Yes, my two consecutive 2-year terms are up already. I've enjoyed serving the ESA and have taken immense pleasure in seeing several new initiatives take hold. We now have a yearly tradition of identifying upcoming as well as established researchers in electrostatics outside the ESA family and inviting them as guest speakers to our meetings. Several of these individuals have now become regular attendees and their involvement in the organization continues to grow. The Web site is now secure and stable, offering online membership application, conference registration, and secure online payment. The ESA body continues to grow, with over 50 new paid members in the past three years. Our financial position remains strong, and we have managed to maintain the core characteristics that make us the Friendly Society. I look forward to continued involvement in the ESA and offer whatever assistance I can to the new President. (See note about upcoming elections elsewhere in this newsletter.) As my predecessor Al Seaver noted in his farewell message, “It's been a good four years!”

For the Friendly Society,

Mark N. Horenstein

ESA President

## **It's Election Time!**

The ESA Bylaws provide for the election of officers every two years. Members vote for a complete slate of candidates at the annual meeting, and anyone is eligible to nominate or be part of a slate. Thus far, we have only one nominated slate of candidates for this year's election:

Slate of ESA Officers for 2003-2005:

President:	William Vosteen, Monroe Electronics
Vice President:	Kelly Robinson, Eastman Kodak
Executive Council:	Sheryl Barringer, Ohio State University (double check her school)
Executive Council:	John Gagliardi, Rutgers University (check; not yet asked)
Executive Council:	Mark Zaretsky, Eastman Kodak

If anyone would like to nominate an alternate slate, please inform me (mnh@bu.edu) before the June conference that we can prepare election materials for the business meeting. Absent an alternate slate, we will likely approve the current nominated slate by acclamation.

## **Electrostatics In the News...**

### **Hazards at the Pump**

The topic of electrostatic hazards, long the sole province of ESD specialists, has gone mainstream. National news outlets such as CNN and MSNBC have run feature stories on the dangers of gasoline vapor ignition while refueling automobiles. Be prepared to answer your neighbors questions, but remember – just because you know about electrostatics does not mean the danger won't come your way. Be aware of the following tips:

- If a gas pump fire occurs - DO NOT pull the nozzle out. Get away and tell attendant to turn off the pumps.
- Avoid getting back into your car while gas is pumping.
- If you must go back into your car once you've started refueling, make sure you discharge any static by touching another metal object before going near the gas nozzle.

### **Electrostatic Pants**

A company is now marketing – yes – electrostatic pants and other garments. No, not an ESD dissipative suit. The EC2 QwikDri Electrostatic Comfort Process claims to “have the ability to actually lift moisture molecules away from the body and break them down

for rapid evaporation.” A composite of nylon, polyester, and silk fibers, “EC2’s negatively-charged particles attack the natural cohesion that holds moisture in drops by attracting the positively-charged ends of water molecules and breaking them down. The electrostatic charge pulls moisture from the skin and disperses it through the fabric for rapid evaporation.”

Has anyone heard about this product? Is the electrostatics real? Do the pants work? Let us know.

### **Electrostatics and Homeland Security**

A radiologist from Cleveland University Hospital, Dr. John Haaga, is marketing silk neckties and scarves lined with “electrostatically charged filtration fabric” [presumably and electret material] that “traps airborne particles from pollen to anthrax.” Filtration is claimed to be 99% of particles bigger than 0.1 microns compared to about 87% for a cotton T-shirt. See [fbsclothing.com](http://fbsclothing.com) for more info

### What do you know about DHMO?

Are you concerned about the possible dangers of dihydrogen monoxide? DHMO is a colorless, odorless, tasteless, substance that can be fatal if accidentally inhaled. Prolonged exposure to its solid or gaseous form can cause severe tissue damage. Symptoms of severe DHMO ingestion include excessive sweating and urination, a bloated feeling, nausea, vomiting and body electrolyte imbalance. Lifetime ingestion of DHMO results in physiological dependency; for those who have become dependent, DHMO withdrawal means certain death.

Dihydrogen monoxide:

- Is also known as hydroxyl acid, a major component of acid rain.
- Contributes to the "greenhouse effect."
- May cause severe burns.
- Is known to accelerate corrosion of many metals.
- Has been found in excised tumors
- Has now been found in the bodily fluids of purebred laboratory test animals.

In the field of electrostatics, DHMO actually has the beneficial effect of helping to dissipate unwanted charge, but for those who work in high voltage, excess contamination by DHMO can contribute to accidental electrocution. Contamination is widespread; DHMO can now be found in most all regions globally. Quantities of dihydrogen monoxide can be found in every stream, lake, and reservoir in America today, and has even been found in Antarctic ice. Is your neighborhood contaminated with DHMO? For more information, see [www.dhmo.org](http://www.dhmo.org).

### **Newsletter Note:**

For reasons that are multifaceted, the Newsletter has been sporadic this past year, and several members have expressed concern. The dilemma has been resolved, however, and you can look forward to receiving the Newsletter on a regular basis in the future.

### **Electronic Delivery:**

If you wish to receive the Newsletter electronically in lieu of paper, please send a brief e-mail to the Webmaster at [mnh@bu.edu](mailto:mnh@bu.edu).

### **Electrostatics Society of America –**

**“A Professional Society Dedicated to an Understanding of Electrostatics ”**

Mark N. Horenstein, President

S. Edward Law, Vice President

Mark Zaretsky, Executive Council, Newsletter Editor

Humphrey Wong, Executive Council

Albert Seaver, Executive Council

Steve Cooper, Secretary/Treasurer